Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed

EAST COAST ARMAMENT COMPLEX POINT WILSON, VIC.

(Third Report of 1998)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1998

The Parliament of the Commonwealth of Australia

Parliamentary Standing Committee on Public Works

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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

(Thirty-Second Committee)

Mr Wilson Tuckey MP (Chairman)[1]
Mr Colin Hollis MP (Vice-Chairman)

Senate	**House of Representatives**
Senator Paul Calvert	Mr Richard Evans MP
Senator Alan Ferguson	Mr John Forrest MP
Senator Shayne Murphy	Mr Ted Grace MP
	Mr Michael Hatton MP[2]

1 Replaced Mr Neil Andrew MP as Chairman on 4 September 1997
2 Replaced The Hon Michael Lee MP on 26 June 1996

Committee Secretary:	Bjarne Nordin
Inquiry Secretary:	Michael Fetter
Senior Research Officer:	Ian McKinnon
Administrative Officers:	Belynda Zolotto

EXTRACT FROM THE

VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES

No. 136 dated Wednesday 3 December 1997

PUBLIC WORKS—PARLIAMENTARY STANDING COMMITTEE—REFERENCE OF WORK—EAST COAST ARMAMENT COMPLEX, POINT WILSON, VIC.

Mr Fahey (Minister for Finance and Administration), pursuant to notice, moved—That, in accordance with the provisions of the *Public Works Committee Act 1969*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for consideration and report: East Coast Armament Complex, Vic.

Question—Put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

East Coast Armament Complex, Point Wilson, Vic

On 3 December 1997, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposed East Coast Armament Complex, Point Wilson, Vic.

THE REFERENCE

1. The terms of the reference were as follows:

> *The Department of Defence proposes to construct an east coast armament complex at Point Wilson, Victoria, to support ammunitioning and deammunitioning of ships of the Royal Australian Navy. The proposal will provide explosive and non-explosive storehouses, a transit facility, container parking and truck holding bays, an administration centre, a workshop security checkpoint, an isolation facility, engineering services and civil works. The existing jetty and wharf amenities will be refurbished. In addition to the Point Wilson works, use of existing facilities on the coast of New South Wales is proposed. Defence would purchase barges to transfer explosive ordnance between ship and shore at these locations.*

2. When referred to the Committee, the estimated out turn cost of the proposal was $72.27 million.

THE COMMITTEE'S INVESTIGATION

Inspection of Point Wilson and public hearing in Geelong

3. The Committee received a written submission from the Department of Defence (Defence) and took evidence from Defence officials at a public hearing held in the Chambers of the Council of the City of Greater Geelong, on Friday 13 February 1998. The Committee also took evidence from Mr Gavan O'Connor MP (Federal Member for Corio) and representatives of the Combined Environment Groups.

4. Prior to the public hearing, the Committee inspected Defence-owned land at Point Wilson, the jetty and wharf and the sites proposed for various elements of the proposed work.

Further information requested

5. As a result of the early evidence and following the public hearing held in Geelong the Committee, on 6 March 1998, wrote to Defence and requested further information and a briefing on the following points:

- the advantages and disadvantages, including cost comparisons, of the construction of an ECAC at Jervis Bay, Eden and Point Wilson;
- the availability of land at Jervis Bay and Eden suitable for the construction of facilities for the storage of armaments and the necessary buffer zones at volumes envisaged for Point Wilson;
- if there are any wharves which could be used for the loading and offloading of armaments at Jervis Bay and Eden; and
- the practicalities of using lighters at Jervis Bay and Eden for the transhipment of armaments from naval and commercial vessels.

Further hearing in Canberra—26 March

6. On 26 March 1998, the Committee conducted a further hearing in Canberra at which the Committee considered a written response from Defence to these matters and further examined Defence officials about possible alternative sites along the east coast.

Public hearing in Eden

7. Following this briefing, the Committee, by resolution, extended the scope of the inquiry to include an examination of the feasibility of the construction of facilities to support the handling and storage of ordnance required for the support of naval vessels at Eden, NSW. Advertisements, calling for public comments were placed in newspapers covering the far south coast of NSW on 7-9 April 1998. A public hearing was subsequently held in Eden on 27 April at which the following organisations and individuals gave evidence:

- Mr Gary Nairn MP—Federal Member for Eden-Monaro;
- Bega Valley Shire Council;
- NSW Office of Marine Administration, Ministry for Forests and Marine Administration;
- South-East Regional Strategic Planning Forum;

- Eden Chamber of Commerce;
- Australian Maritime Safety Authority; and
- Defence (including the President of the Australian Ordnance Council.

8. Prior to the public hearing, the Committee inspected the site occupied by the Harris Daishowa (HDA) woodchip processing and loading facilities at Munganno Point and the potential site for a wharf and jetty at Munganno Point.

Further hearing

9. On 14 May, the Committee reconvened in Canberra to address further a number of issues which had emerged in evidence. Principal amongst these, was the question of the use of commercial shipping used for the importation and transport of explosives into Australia. This hearing was attended by Defence officials and the Managing Director of Deflog, a commercial enterprise which arranges the import and export of explosives to Australia.

Inspection of facilities at Port Alma and further evidence

10. Between 14-16 June, a Sectional Committee inspected Port Alma, which is located 62 kilometres by road south of Rockhampton, Qld. The Sectional Committee also inspected the Queensland Government explosive magazine facilities at Bajool, located on the Bruce Highway about 20 kilometres from Port Alma.

11. On 15 June, the Committee took further evidence, in Brisbane, from the Chief Executive Officer of the Rockhampton Port Authority, which administers Port Alma.

Sufficient evidence assembled

12. On the basis of the extensive nature of the Committee's inquiry into this reference, the Committee believes it has gathered sufficient evidence to make a determination on this proposal. Before addressing the basis of its recommendations and conclusions, it is necessary to consider the background to events and circumstances which have prompted the reference.

THE NEED

Outline of requirements

13. Defence advised the Committee that an ECAC is required for the ammunitioning and deammunitioning of Naval ships and for the import of Defence explosive ordnance in commercial vessels. The handling and storage involved must be in accordance with NATO safety principles.

NATO SAFETY PRINCIPLES AND PUBLIC RISK WAIVERS

Levels of Hazard

14. Explosives are in 4 hazard divisions:

- Division 1.1 is high blast items which throw out large quantities of high velocity debris, blast and fragments through mass detonation;
- Division 1.2 has similar effects but no mass detonation;
- Division 1.3 is a flame hazard only; and
- Division 1.4 is smallarms.

NATO safety principles

15. The President of the Australian Ordnance Council advised the Committee that apart from explosive area regulations, which are used for the administration of Point Wilson, there is no Commonwealth legal guidance on the storage, handling and port activities. This may stem from the early division of Commonwealth and State responsibilities when it was perceived that explosives logistics activities would be conducted through State facilities. While State legislation provides some guidance, Defence believes that this legislation "could not be called at the cutting edge of explosives safety technology"[1]. Current Australian Standards are also lacking.

16. In 1981, Defence solved the problems by adopting the world's best practice for guidance on the storage, transport and handling practices, namely the NATO safety principles. These NATO safety principles make the use of separation distances or quantity distances mandatory. The greater the quantity of explosives held, the greater the distance required to separate explosives to exposed sites.

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[1] Minutes of Evidence, Public Hearing 27 April 1998, p. 490

17. Quantity distances are based on tolerable risk as approved by the Government. The following factors are considered when deriving these distances:

- blast effect;
- thermal effects; and
- fragmentation effects.

18. Two types of quantity distances, are imposed, as follows:

- internal distances are separations between explosive storehouses, manufacturing and workshop facilities, other dangerous goods storage and some internal administration facilities. They aim, in the event of an incident, to prevent an entire facility exploding sympathetically;
- external distances have two subsets:
  - public traffic distances applying to roads, railways, public parks, recreational areas where no structures are involved, and
  - inhabited building distances, which are applied where people live and congregate in large numbers. These two distances are colloquially known as green and yellow arc distances respectively. They have a minimum default of 270 metres and 400 metres respectively for fragmentation effects.

19. Another distance is the purple arc, and is equivalent to twice the inhabited building distance, or yellow arc distance, although the 400 metre fragmentation distance is not doubled.

Current Defence policy

20. The Committee was advised that it is current Defence policy that when siting ordnance facilities, the zone within the purple arc should be contained in Defence-owned or controlled property.

21. Defence believes that the explosives logistics safety procedures are based on a firm legal requirement backed up by appropriate statutes, regulations and standards; the training of personnel to high standards and understanding of explosives and munitions technology; the promulgation of specific safety procedures; the imposition of separation distances where necessary; and monitoring and auditing to ensure that standards do not diminish.

Waivers

22. Sometimes situations occur where it is essential for an activity to be conducted, yet the conduct of that activity does not comply in terms of risk to property or people. In such cases waivers are requested. If the activity results in an increase in risk to Defence property or personnel in support of the explosive related operations, then a risk waiver for a limited time may be approved by specified senior Defence personnel. This is a departmental risk waiver.

23. If the activity results in risk to non-Defence personnel and property, a public risk waiver must be approved by the Minister for Defence.

24. Waivers to transport related activities, generally, require the approval of the Minister for Transport and Regional Development.

25. The States use risk hazard analysis and accept tolerable levels of risk. Defence is expected to ensure consequential analysis.

Requirement for an ECAC

26. The requirement for an ECAC has arisen as a result of the closure of the Sydney Ammunition Pipeline (SAP) and the condition of and the facilities available at what Defence believe to be the only possible alternative site for a replacement facility at Point Wilson in Victoria.

The Sydney Ammunition Pipeline

27. Warships require to be deammunitioned before they enter dockyards for maintenance. At the conclusion of maintenance, warships require to be reammunitioned. In addition, following work-up trials or after exercises, warships may require spent ammunition to be replaced.

28. The Navy's east coast Fleet Base is located at Garden Island in Sydney Harbour. Major work-up trials, which usually follow ship refits, are undertaken off the NSW coast, adjacent to Jervis Bay.

29. Procedures for the ammunitioning and deammunitioning of warships have been and remain cumbersome. For reammunitioning, ordnance is transported by road and waterways, through heavily urbanised areas. This is the SAP. A public risk waiver is required to operate the SAP.

30. The pipeline originates at the foot of the Blue Mountains at Defence Area Orchard Hills (also known as Kingswood). This complex houses the RAN Armament Depot and guided weapons maintenance facilities. For ammunition to be provided to ships in Sydney Harbour, it is loaded onto semi-trailers for road transport to RAN Armament Depot, Newington, which is located in the middle

of Sydney's Western suburbs. Here the ammunition is transferred from semi-trailers onto special ammunition barges and is transported down the Parramatta River to Sydney Harbour where it is loaded onboard warships at special ammunitioning buoys near the Fleet Base at Garden Island.

31. The Newington facility was once the wholesale storage site for conventional ammunition. The depot closed in December 1996 in anticipation of a new ECAC. Ammunition has consequently been distributed to other facilities. The land at Newington has been sold to the NSW Government for the Olympic Games. Defence has leased back an area to enable breakdown and inspections of ammunition to be undertaken.

32. The Government has decreed that current arrangements are to cease by December 1999. Alternative arrangements to the SAP would need to be operational by then.

Ministerial announcement

33. Navy and Defence have been interested in relocating Newington for two decades. Up to 60 alternative sites were considered in early studies. An interdepartmental committee recommended five worthy of further consideration. The Navy preferred Eden and Jervis Bay. The latter was found to be unsuitable for environmental reasons.

34. Against this background, in 1992, the Minister for Defence made a commitment to relocate the Naval armament depot at Newington and close the SAP by establishing a new ECAC. Two years later, in April 1994, the Government announced the decision to locate the ECAC at Point Wilson, Victoria, subject to satisfactory environmental clearances. An Environmental Commission of Inquiry was established in accordance with the provisions of the *Environment Protection (Impact of Proposals) Act 1974.* In January 1996, the Commission recommended to the Minister for Environment, Sport and Territories that the project be allowed to proceed, subject to a number of conditions.

Original proposal

35. The proposal originally envisaged was extensive in scope and expensive to construct and comprised:

- explosives storehouses for the storage of the Navy’s east coast fleet explosive ordnance and Defence’s wholesale missile stocks;
- associated facilities for handling, maintenance and inspection of explosive ordnance;

- an integrated missile maintenance facility;
- a disposal facility for damaged or suspect explosive ordnance;
- an administration facility;
- a 2000 metre jetty off the southern shoreline of the site (the first 650 metre of the jetty being a solid rock causeway) and a wharf, for ammunitioning and deammunitioning operations; and
- a turning basin at the wharf and an approach channel to the main shipping channel, dredged to 11 metres below chart datum.

36. The original proposal also included the purchase of the land owned by ICI Australia Ltd and some Crown land.

37. Construction was planned to commence in mid-1996, and operations would have commenced in 1999. The project would have employed 110 people initially and 270 people when the missile maintenance facility was fully operational.

Re-examination of original proposal

38. In August 1996, the Minister for Defence requested Defence to examine more cost effective solutions for the ammunitioning/deammunitioning of Naval ships, with Point Wilson being a central point for this activity. This led to a review of the Navy's logistics management.

39. As a result of the review, Defence advised the Committee that a more flexible explosive ordnance model designed to serve the east coast fleet was developed. This was also based on the use and development of Point Wilson. Defence advised the Committee that while the overall purpose of the facility remains similar in nature, the requirement for on-site storage and maintenance of explosive ordnance has been reduced and the number of expected ship movements has been reduced from approximately 80 in the original plan to 25 ships per year.

40. In addition to a reduction in the scope of works required at Point Wilson, the more flexible explosive ordnance model envisaged by Defence would make use of existing facilities on the coast of NSW for ammunition `top-ups'. Port Kembla and Eden were under consideration for these activities. The non-availability of wharves would be overcome by the acquisition and use of ammunition crane lighters to transfer explosive ordnance between ship and shore. The cost of these lighters was included in the cost of the works in the reference under consideration by the Committee.

41. Ammunitioning would occur when a ship starts a work-up cycle. At the end of the cycle there would be a need to top up ammunition comprising 60-80 rounds of practice ammunition, or 40-50 rounds of high explosives. Missiles would not be loaded through a top up facility.

42. The original proposal had the maintenance facilities at Point Wilson. A review was undertaken which revealed that it would not be cost effective to relocate the maintenance capability to Point Wilson and the concept of operations at Point Wilson was consequently reviewed. There is an efficiency trade-off, but the original ECAC cost was well over $200 million and Defence were asked to re-examine the concept to reduce capital cost.

NEED FOR AND SCOPE OF THE REDUCED WORKS

43. The scope of the reduced works, nevertheless remained extensive and expensive. The works envisaged by Defence would be required to sustain activities, formerly the province of the SAP, and to provide improvements for the importation of explosive ordnance.

Cost

44. The cost of the original reference of $72.27 million included the following components:

- construction costs;
- land acquisition;
- crane lighters;
- fees and charges;
- furniture and fittings;
- construction contingency;
- expenditure on the Commission of Inquiry; and
- preliminary project development of the original ECAC proposal.

45. The initial submission from Defence did not spell out a key ingredient in the concept, namely the 1,000 tonne Net Explosive Quantity (NEQ) capacity. This capacity was driven in the main by the licenced capacity of commercial vessels which transport military and civilian explosives into Australia and not the naval requirement.

46. It was only after the Committee posed a number of questions to Defence that this requirement became obvious. The brief from Defence stated that an ECAC is required to satisfy two strategic capability requirements central to the project:

- a Commonwealth capability to import/export bulk explosives through a port which meets NATO safety principles. The port needs to be licenced to 1000 tonnes NEQ; and

- a Defence capability to ammunition and deammunition the East Coast Fleet that meets the NATO safety principles. A licenced berth of 250 NEQ tonnes is required to accommodate the Navy's largest ship

Description of Point Wilson

47. The Point Wilson Explosives Area (PWEA) is a Commonwealth site of 326 hectares, situated on the northern shore of the Geelong Arm of Port Phillip Bay between Melbourne and Geelong. The site is 60 kilometres by road from Melbourne, 25 kilometres by road from Geelong and is accessible from the Princes Highway, eight kilometres to the northwest.

48. Approximately 790 hectares of land around the PWEA is owned by ICl Australia Limited and is mainly used for grazing. Part of this land has been leased for quarrying purposes.

49. Other nearby land uses include the Avalon Airport, Murtcaim Wildlife Area, the Western Treatment Plant and the Cheetham Saltworks at Lara. There is a low residential population in the area, with the nearest residence being about four kilometres from the PWEA.

50. Coastal wetlands in the area are of significance under the Ramsar Convention on Wetlands of International Importance and are important habitats for a number of migratory bird species listed under international treaties. The endangered Orange-bellied Parrot uses the coastal saltmarsh as a winter habitat.

Need for and scope of reduced works

51. In summary, the proposal referred to the Committee reflected the reduced scope of work at Point Wilson and involved refurbishment and new construction encompassing the following elements:

Jetty and Wharf

52. The existing 2,700 metre steel and concrete jetty and wharf structure was constructed in the late 1950s, with an estimated life of about 40 years. Explosive ordnance is transported by truck to the wharf and loaded onto the vessels by cranes. Shipping containers are unloaded from commercial ships directly onto semi-trailers and transported to the on-shore complex.

53. Defence believe that the wharf and jetty require refurbishment for the following reasons:

- corrosion due to the breakdown of the existing corrosion protection systems;
- the existing timber fendering system, which has been suitable for commercial vessels, is not suitable for RAN ships and submarines;
- the wharf is too narrow to safely turn semi- trailers;
- the wharf and the angled jetty approach are too narrow for emergency vehicles during RAN armament loading operations;
- the wharf working area is limited due to light poles along the centre of the wharf; and
- fire services need to be upgraded to meet current fire protection standards and the services and infrastructure also need to be upgraded to meet the current needs of the facility and visiting ships.

Proposal

54. Defence proposed a comprehensive refurbishment program to extend the life of the jetty and wharf by at least 30 years. The refurbishment works would consist of patch repairs to the concrete deck, the installation of a corrosion protection system for the concrete reinforced deck, re-coating of all steelwork above water level with a protective coating and the installation of a steel pile underwater cathodic corrosion protection system.

Explosive ordnance storage and handling facilities

55. Explosive ordnance storage and handling facilities are required to accommodate the receipt, storage, issue, inspection and maintenance of explosive ordnance.

56. The four existing explosives storage and handling buildings were constructed in 1981 and do not cater for the forecast explosive ordnance storage and handling needs of the complex.

Proposal

57. The existing four buildings were proposed for refurbishment and four new buildings were proposed.

Transit Facility

58. A Transit Facility was proposed to be a processing and interchange facility for explosive ordnance in transit between the wharf and off-site storage facilities or on-site storage areas of the complex.

Container Parking and Truck Holding Bays

59. The proposal included eight bays able to be used for container parking and truck holding. In the container parking role, the bays would be used for the safe and secure parking of shipping containers carrying explosives prior to transportation offsite or removing the explosive contents from the containers. Each of the bays would be of sufficient size to accommodate up to 10 shipping containers with manoeuvring space for materials handling equipment.

Emergency Inspection Area

60. An emergency inspection area was proposed to be a concrete slab on ground approximately 10 metres long by 10 metres wide. The proposed facility was intended to be used for the inspection of potentially unsafe or damaged shipping containers and rectification prior to transport on the highway.

Support Facilities

61. Support facilities were required to accommodate administration and support.

MATTERS CONSIDERED BY THE COMMITTEE

Utilisation

62. The Committee's inquiry focused on a number of aspects which ranged beyond the scope of the reference. This followed evidence given at the first day of public hearings on 13 February which revealed that a substantial investment in facilities was proposed and that the utilisation of these facilities, on an annual basis, would be infrequent. Impracticalities associated with the location of Point Wilson in relation to the East Coast fleet base and the Navy's main exercise area were also raised by the Committee and were acknowledged by Defence to present a far from ideal situation. It was established that Jervis Bay or Eden were preferred by the Navy for reasons of practicality. The former was unacceptable for environmental reasons. The latter for cost and public safety reasons.

63. The 1000 tonne NEQ was considered by Defence to be the driving force behind the selection of Point Wilson as the most suitable location at which to base an ECAC.

64. For these reasons, the Committee examined the practicalities and associated costs of alternative ordnance loading, unloading and importation arrangements beyond what Defence proposed. This examination involved consideration of a number of factors outlined in the following paragraphs.

Number of ammunitionings and deammunitionings envisaged

65. Defence estimate that there would be nine major and 24 minor ammunitionings in a year. These would require land-based handling facilities to be used for between 33-45 days. The number of ammunitionings assumes that 'top ups' would be done elsewhere.

Importation of ordnance

66. Commercial ships, with relatively small gross tonnage, are used to transport ordnance and explosives from Europe and the United States. Typical voyages commence in Europe with visits to the east coast and sometimes the west coast of the United States to collect further cargo containers. From the United States they may proceed to New Zealand. Their first Australian port of call is at Port Alma, which is located about 62 kilometres south of Rockhampton where commercial containers are unloaded. From Port Alma, the ships proceed to Point Wilson to unload Defence ordnance and commercial explosives. They may then proceed to Burnie, Tasmania, to unload further explosives. The ships carry between 300 to 800 tonnes of explosives upon their arrival in Australia, which is reduced as the various ports are visited.

67. Previous activities at Point Wilson are as follows:

- 1995—two commercial container ships—18 military containers and 9 commercial;
- 1996—3 commercial container ships—80 military containers and 15 commercial; and
- 1997—3 commercial operations—72 military and 20 commercial

68. Defence advised that the largest single shipment was 70 containers. The annual average is 85 containers. Defence also advised that Defence containers weigh in the order of three to five tonnes, while commercial containers would weigh 12 tonnes and could be as high as 17 tonnes.

69. The Committee questioned Defence about the type of ordnance carried in the containers. Defence advised that integrated weapons, missiles and torpedoes would be in exactly the same state as they would be on a warship. They have initiators, boosters and warheads, but are not armed. This requires arming arrangements involving electrical, electronic and physical activities. There is an inherently high degree of safety built into the weapons to achieve separation of the chain of explosives.

Transport of ordnance, storage and maintenance

70. Under a Point Wilson ECAC proposal, ammunition taken off at Point Wilson would remain there or would be transported to Kingswood. The infrastructure required at Point Wilson has been reduced to the storage of three ships' outfits of ordnance. Under this scheme no maintenance would be undertaken at Point Wilson, which would be carried out at Kingswood.

71. The Committee questioned the number of trucks which would need to travel between Point Wilson, Kingswood and other Defence ordnance storage facilities. Defence was unable to specify the number of trucks but advised that the road transport of ordnance has been undertaken on major highways for many years without incident. Ammunition from Kingswood to Western Australia is also carried predominantly by truck.

72. For the importation of ordnance through Point Wilson, containers would be offloaded and arranged and dispatched on explosive trucks. Defence confirmed that once the trucks leave Commonwealth property they would operate under State law.

Alternative sites focus on Eden and Port Alma

73. Having established operational parameters and user requirements, the Committee requested Defence to examine and report back to the Committee on the feasibility of providing facilities at Eden for the Navy's ammunitioning and deammunitioning functions.

74. Defence provided the Committee with a written report of preliminary findings at the public hearing held in Eden on 27 April.

75. Defence advised that the investigation of the feasibility of conducting ammunitioning and deammunitioning of Naval vessels at Twofold Bay concluded that the requirement can be met if certain limitations are accepted. The need to relocate the HDA woodchip facility can be obviated by reducing the NEQ from 250 to 30 tonnes and constructing a jetty to increase the distance between the wharf and HDA facilities.

76. Reducing the NEQ to 30 tonnes would place an operational limitation on the wharf to one vessel at a time, whereas the previous planning basis provided the flexibility of multiple concurrent vessel operations. This loss of operational flexibility may be overcome in certain situations, such as in time of contingency, by implementing a public risk waiver.

77. With a 30 tonne NEQ, the HDA woodchip facility would be outside the yellow safeguarding arc but inside the purple arc. As it is Defence policy to control all land within the purple arc, a suitable agreement would need to be negotiated with HDA and the State Government to prevent incompatible developments within the purple arc.

78. A 200 metre by 26 metre wharf and a 700 metre jetty could be constructed at East Boyd Bay, south of Jews Head. Studies indicate that as a result of the reduction in the number of shipping movements and with appropriate alignment of the wharf and close management of ship movements, Twofold Bay would be operationally acceptable without the need for a breakwater.

79. A lead time of 12-24 months would be required for environmental assessments and design development. An interim facility would be required from December 1999 until completion of the Twofold Bay facility. This would not be expected until late 2001.

80. Defence advised that the estimated cost to construct a wharf and staging facilities at Eden, including environmental studies, development fees, contingency and indexation would be $55 million. When sunk costs and the cost of lighters are added, the total cost is $74 million.

81. The reduction in Navy's steaming time and road transport costs resulting from Twofold Bay operations would provide cost savings of $1.6 million per annum.

82. Defence did, however, point out that even if facilities were constructed at Eden there would still be a requirement to maintain a facility which could conduct an import function of 1,000 NEQ tonnes to accommodate commercial ships.

83. A facility at Point Wilson, which would be used from four to six times a year would cost in the order of $30 million.

Investigation of Port Alma

84. Having confirmed the feasibility and broad costs of constructing a naval ammunitioning and deammunitioning facility at Eden, the Committee turned its attention to Port Alma, which had been mentioned in evidence as the first port of call of commercial ships carrying explosives including Defence ordnance, into Australia. Commercial explosive cargoes are unloaded at Port Alma and the ships then travel considerable distances along almost the entire length of the eastern Australian coast to discharge relatively small quantities at Point Wilson. The Committee therefore sought to establish the feasibility of undertaking the unloading of Defence ordnance at the first port of call of the specialist explosive ships.

Description of capabilities

85. The Committee established that Port Alma can and does handle large quantities of ammonium nitrate (Class 5.1) and explosives (Class 1) compared with other Australian Ports. Depth at the three berths (low water) is 9.2 metres.

86. Operations are carried out in accordance with the following statutory and agency limitations, restrictions and procedures:

- the Queensland Transport Operations (Marine Safety) Regulations and Standards 1995. These place obligations on certain persons and place limitations of the quantities of explosives permitted on a ship in a pilotage area. At Port Alma, these limits are currently gazetted at 15,000 tonnes for ammonium nitrate and 1,500 tonnes for explosives;

- Rockhampton Port Authority procedures; and

- other authorities such as the Queensland Inspector of Explosives and the Australian Maritime Safety Authority.

87. The Port currently imports ammonium nitrate, explosives, calcium nitrate and general cargo. Exports include salt, frozen beef and tallow, live cattle, explosives, scrap metal and general cargo.

88. The port has three berths, comprising one general berth with a 25 tonne fixed leg crane, one berth for general cargo and one berth which provides for the import of petroleum products and export of bulk cargo. In 1995/96 the port handled the importation of 39,121 tonnes of ammonium nitrate and 1,447 tonnes of explosives.

89. The capacity to handle these quantities of ammonium nitrate and explosives is amongst the highest in Australia. The Queensland Government Magazine is located at Bajool, about 20 kilometres from the port. Destinations of ammonium nitrate cargoes are typically throughout Queensland for mining purposes, while explosives have been transported overland as far as Victoria and Western Australia.

90. An all weather road links the Port with Bajool. While in former years the Port was connected with Bajool by rail, this has been discontinued. The rail easement still exists and follows the road alignment. However, both ammonium nitrate and explosives are regularly transferred from road to rail at Bajool. Up to 4,500 tonnes of ammonium nitrate from one shipment have been transferred from truck to rail and complete trainloads of explosives, destined for other States, have become regular practice.

FURTHER CONSIDERATION BY DEFENCE

91. At the conclusion of the public hearing on 14 May, Defence were requested to provide further information on:

- the Eden option;
- interim arrangements for Point Wilson;
- the effect of commercialisation on the storage, maintenance and distribution of ordnance; and
- alternative import sites.

92. In anticipation of the visit by the Sectional Committee to Port Alma, a number of Defence officials visited the Port, inspected Port facilities and held discussions with the Port Authority.

93. Defence provided the Committee with another briefing paper prior to the Sectional Committee's inspection. Issues covered in the briefing paper, which

refines a number of earlier possibilities, operational procedures and costings are discussed in the following paragraphs.

Refinement of Eden option

94. In the interval between 27 April and the beginning of June, Defence identified a series of wharf options and preliminary cost estimates for a complete ammunitioning facility at Twofold Bay.

95. The capital cost was refined and is now estimated to be $59.4 million. This includes a contingency of 12 per cent and indexation for escalation of costs.

96. The estimate was developed in the absence of definitive geotechnical or wave motion data. For this reason, $7 million has been included in the estimate for additional protection of the berth from the elements, should this required.

97. The location of land-based elements for the facility has not been determined and $1 million is included in the cost for additional civil and engineering services. The extent of dredging required will also need to be refined during further development of a project.

Eden option—Scope and operational conditions and requirements

98. Defence made a number of assumptions in further refining the scope of works which the Eden option would require and also stated operational conditions and requirements which would stem from this.

99. The basic assumptions are that the Eden option would need to support the Navy's east coast fleet and units on deployment from the west and the north. This would require a "steady state" usage of 33 ammunitioning operations spanning 45 days annually. Defence also assumed that a surge in activities, to support task groups, may involve 47 ammunitionings, spanning 70 days each year.

Operational capabilities required

100. To meet these operational requirements, the following capabilities are required:

- an ability to clear the Navy's Auxilliary Oiler Replenishment ship (AOR) or a major combatant outfit within one day;
- the capacity to conduct a worst case scenario of deammunitioning an FFG frigate on Day 1 and the ammunitioning of an ANZAC frigate on Day 2; and

- a top-up capability for practice ammunition close to the Fleet exercise area.

101. The capabilities would therefore need to provide an efficient, safe and economical means of handling explosive ordnance, its storage, examination and maintenance. Defence believes that the following elements would be required to achieve this:

- a wharf;
- land based facilities; and
- buffer zones.

Wharf

102. A wharf licenced for 30 tonne NEQ would be required. This would create a purple safety arc of 1,380 metres, but would not cater for a 50 tonne contingency requirement for HMAS *Success* (the AOR), nor the 100 tonne Australian Defence Force deployment requirement. Therefore, contingency ammunitioning at Eden would need to be conducted under a Public Risk Waiver.

Land based facilities

103. The following land-based facilities would be required:

- three explosive storehouses;
- a transit/isolation facility;
- truck parking bays;
- non-explosive area; and
- additional support facilities including security fencing and civil works.

Buffer zones

104. Under current Defence policy, there would be a need to establish a buffer zone around explosives facilities to provide control over land within the purple arc. This is required to ensure that no development occurs within the arc which could adversely affect Defence activities.

105. For depot buffer zones, the area which would be required is about 500 hectares. Defence believes this land would need to be purchased.

106. Buffer zones around the wharf, the safeguarding arc, would encompass an area of 1,380 metres. To achieve this separation, Defence believes it would be necessary to consult with external authorities, including State and local government, HDA and other commercial and individual interests.

Operational concept envisaged

107. Defence envisages the following concept of operations at Eden if the Navy ammunitioning wharf were to be provided:

- the wharf and associated landbased facilities would be Defence owned, controlled and operated;
- in peacetime the Navy would use the wharf for up to 70 days annually;
- the wharf could be used by commercial operators but Navy activities would take priority;
- the Navy would closely monitor commercial operators to ensure their activities do not compromise Navy operations, facilities or safety; and
- the use of the wharf by commercial operators would be based on negotiated commercial practice and costs.

Contribution by the NSW Government

108. At the public hearing held in Eden on 27 April, the NSW Government indicated that Munganno Point has been identified as the only practical site for the development of an export wharf which, at the time, was under consideration to support the export of product from an orient strand board plant at Bombala. The NSW Government has allocated $5 million towards the cost of the wharf, provided the Bombala plant proceeds, with the Commonwealth contributing a further $3 million.

109. The NSW Government advised the Committee that it would be feasible for the Navy requirement and the proposed multi-berth export facility to be combined without significant disadvantage to either party, subject to a number of conditions. These included:

- the level of availability of the facility for commercial port users;
- navigation considerations;
- exclusion zones and their effects;

- availability of land for storage in the vicinity of the wharf for commercial port users;
- financial considerations, including capital funding, land ownership and ongoing costs and charges;
- environmental considerations ; and
- possible Native Title issues.

110. The NSW Government expressed confidence that these issues could be resolved through mutual cooperation, should it be decided to proceed with the complex at Eden.

Minimal work at Point Wilson

111. The ammunitioning of Naval ships in Sydney must cease by December 1999. Defence believes there is a need, therefore, to maintain the Point Wilson site until at least an alternative Navy ammunitioning facility is available.

112. Defence have examined the estimated cost to use Point Wilson as an interim facility until at least 2002. The estimated cost of this is $2.73 million. It is the Committee's view that no further expenditure of funds should be made at Point Wilson until a detailed response to the Committee's report has been prepared and an amended proposal has been referred. In the interim, the Committee requires Defence to provide advice about the nature of any further proposed expenditure at Point Wilson. An alternative use of these funds could be to improve facilities at Port Alma and/or at Bajool.

Port Alma—Defence position

113. Defence advised that it is required to comply with NATO safety principles for the unloading and loading of explosive ordnance. The Queensland Government accepts risks at Port Alma which Defence would not.

114. If Defence were to control the offloading of imported explosive ordnance, current Defence policy would require Defence to control the site. No investigation has been conducted into the cost and conditions which the Queensland Government would impose if Port Alma were to become the main Defence import point of entry, or the works required to meet Commonwealth safety requirements. Defence advised the Committee that should the Committee recommend that Point Wilson not proceed as a long term import facility, the strategic implications of alternative import sites would then need to be addressed through normal Defence channels

Impact of commercialisation on ordnance transport and storage

115. A management review of ADF explosive ordnance logistics activities commenced in January 1997. The three existing Service-based armament logistics systems are being integrated to rationalise procurement, engineering, inventory management, transport, storage, distribution, training and experimental functions.

116. As part of this rationalisation, Defence proposed to market test the non-operational components of explosive ordnance logistics relating to storage, maintenance (except guided weapons) and distribution under the Defence Commercial Support Program (CSP). These activities currently employ 440 staff and annual personnel running costs are $16.5 million.

117. Defence have identified a number of significant risks. These include:

- the provision of assured operational explosive ordnance support;
- the creation of a monopoly provider;
- the accommodation of changing Defence requirements; and
- the Commonwealth's potential liability for any safety breaches by a service provider.

118. Defence is in the process of preparing a Statement of Requirement (SOR). This will require the service provider to work with UN classification and NATO storage principles.

119. The SOR is scheduled to be finalised in mid-1998 and tenders are scheduled to close in mid-1999. The date for the commencement of the contract has not been decided, but it is expected to be late 1999 or early 2000.

120. The importation of explosive ordnance on commercial ships is not included in the scope of the CSP, although the unloading and road transport of imported explosive ordnance is expected to be included. Defence will expect that UN and NATO safety principles, currently applying to the import and distribution of explosive ordnance, will also apply to the service provider under the CSP. Defence does not believe that the market testing of explosive ordnance storage, maintenance and distribution will impact on the decision about the location of the Defence explosive ordnance import facility.

CONCLUSIONS AND RECOMMENDATIONS

121. Having considered the extensive evidence assembled as part of this inquiry and having inspected the three major sites involved, the Committee has arrived at the following conclusions and recommendations.

1. The Sydney Ammunition Pipeline will need to close by December 1999.

2. Point Wilson was selected as the only site that could provide both a de-ammunitioning facility and a 1000 tonne Net Explosives Quantity container import facility.

3. In terms of the Navy's operational requirements, Point Wilson is highly unsatisfactory due to:

- **the distance from the Fleet Base in Sydney Harbour and the Navy's exercise area off Jervis Bay;**
- **the depth of water available for its largest ship, which would not allow berthing when fully loaded; and**
- **the lengthy road journey to Kingswood and return to allow for servicing of the unloaded weaponry.**

4. Berthing facilities at Point Wilson require extensive upgrading to provide a long term loading and unloading capability for the importation of explosive ordnance and the ammunitioning and deammunitioning of Naval vessels.

5. These disadvantages were considered acceptable due to the Department of Defence understanding that no suitable 1000 tonne Net Explosive Quantity facility existed elsewhere.

6. Inquiries by the Committee have established that such a licenced facility, Port Alma in Queensland, already exists. In fact, most consignments of Defence ordnance, transported on specialised chartered container ships, berth at Port Alma before proceeding to Point Wilson. Port Alma is fully licenced for a 1500 tonne Net Explosive Quantity.

7. Port Alma does impose an additional distance for land transportation. However, this is offset by reduced sea transport and the fact that very small quantities of containers, approximately 100 per annum, are involved.

8. A slight increase in freight costs easily outweighs the $24.757 million required to upgrade Point Wilson to provide a long term import facility.

9. Once the need for a dual facility is discounted and because the Navy requirement for deammunitioning is approximately 30 tonnes Net Explosive Quantity, numerous deep water facilities closer to Sydney capable of meeting this criterion are available and should be investigated.

10. One such location is Twofold Bay, which offers excellent low cost or free land for on-shore facilities and buffer zones both for the current proposal and for future expansion.

11. The Committee recommends that Defence should therefore re-examine the works in this reference and undertake further investigations into alternatives covered in this report with a view to referring a revised proposal for an armament complex to the Committee at a later date.

Wilson Tuckey
Chairman

25 June 1998

122. The Committee was advised currently facilities at Kingswood have a life up to 2015. Defence advised that studies have been undertaken into the long term viability of the facilities at Kingswood. It is cost prohibitive to locate these facilities elsewhere. When Defence procures new generation of weapons, will be looking at throughlife costs and how the weapons are to be maintained. The missiles in the inventory at the moment will be maintained at Kingswood. To relocate the missile maintenance facility from Kingswood, would require up to 12 months. At Kingswood storage of conventional ammunition and guided weapons. There is also a RAAF component which does missile maintenance and there is also the RAN missile maintenance establishment.

123. When asked by the Committee how often top-ups would take place, Defence stated that ships would ammunition at the start of a work-up cycle and then top-up at the end of a work-up cycle, before commencing an operating cycle. Defence envisaged about 30 'top-up' ship visits per annum for the east coast fleet. Missiles would not be put though top-up facilities.

124. Defence also conceded, in response to questioning from the Committee, that if the facility was built at Jervis Bay, for example, the need for other top-up facilities on the east coast would be obviated.

Need for changes to original proposal

125. The Committee requested more detail on the need to change the original proposal. Defence replied that due to the lapse of time from the original proposal, Defence was now facing a changed operating environment, with new platforms and different weapons. The facility will be a major import point for explosives and provide a capability to do full ammunitioning for the Navy's combatants. ECAC will be a component of a wider, more flexible east coast logistics model.

126. When asked by the committee whether the changes were in order to have a coordinated east coast operation or because of restrictions placed on the original site, Defence stated that they had reviewed the way they wished to operate and incorporated how their primary customer, the Maritime Commander, wanted to receive ammunition.

127. ADI informed the Committee that while they supported the establishment of an ECAC at Point Wilson, it does not appear to provide for the commercial importation of explosives and explosive components required for the supply and manufacture of explosive ordnance in Australia. ADI also noted that the proposal only referred to the importation of explosive ordnance. During the next 30 years, Defence may wish to use the ECAC to ship explosive ordnance to other Australian ports in commercial vessels, or export explosive ordnance off-

shore in support of military operations, or possibly export Australian manufactured ordnance. Defence responded by stating that Point Wilson will provide for licensed commercial importation and exportation of explosives and explosives components as required for the commercial manufacture of explosive ordnance in Australia.

128. ADI Limited advised the Committee that access to Point Wilson was a key factor in locating ADI's new manufacturing facility at Benalla.

1995
1995
1995

At this stage plan was for 200 by 26 metre wharf at end of a 700 metre jetty. A depth of 11 metres would be required to enable HMAS Success to Would aim for 11 metres. This gets Success in with full load of fuel. At Point Wilson were going to manage by bring Success in half-fuelled & taking it to Geelong for fuel.

No reason cannot operate & do 45 days of ammunitioning & use wharf for other purposes for rest of year.

At the public hearing in Eden Revised concept facility—481
Depth required

Transit times

129. The Committee queried whether an additional cost will be incurred by siting the complex at Point Wilson. Defence stated that it will incur an additional transit cost for ships on the east coast to make a two day passage to Point Wilson and a further two day passage to return to the east coast. These costs will be incurred for the life of the complex.

130. The Committee questioned the difficulty of the approach through the narrow heads of Port Phillip Bay, and in particular, the transit of a ship such as a submarine. Defence did not envisage any problem in transiting through Port Phillip Bay. There was no need for large ships, such as the *USS Nimitz*, to transit the Bay. As most submarines were to be based in Western Australia, ECAC would only be used to top up submarines operating on the east coast, and this was unlikely to be a significant issue. When asked by the Committee if they had any concerns about the transit of the Bay in an emergency, Defence stated that they did not consider the two hour transit time from the sea side of the Heads to Point Wilson to be a problem. The overall transit time from the east coast of two days will be built into defence planning.

Cost penalties associated with PW. Defence will pay an additional operational cost for operations from Point Wilson. Transit cost for ships on east coast—2 day passage to Point Wilson and 2 back to Sydney.

1000 tonne NEQ

Ship has licence for 1000 tonnes. So need wharf which has a licence to take NEQ of s ship. Might not have 1000 tonnes when gets there but 1000 is maximum.

1000 Tonne NEQ—need 1000 tonne berth site, 200 tonne parking area for 70 containers and truck waiting positions for 20 tonnes.

Current import arrangements

IMPORTS: 49 Population of ships which do commercial delivery of explosives relatively the same size. Only 12 available in the world.

Ammunitioning and deammunitioning

Deammunitioning: (108) We are talking 20 semi-trailers at a time out of ships which deammunition at Point Wilson. That cannot be done by lighters out of ports on the east coast.

Commercialisation

Defence is examining the commercialisation of the storage, maintenance and distribution of ammunition. The CSP market is being tested within next 12 to 15 months.

Point Wilson is an importation point at the moment. Management of Point Wilson will be assessed under commercial support arrangements. People will put bids on the table about how they will manage it. This will not change Defence requirement for an importation point. Point Wilson is that point. All imported explosives comes through Point Wilson at the moment. Defence is looking at coalescing the import requirement as well as major ammunitioning point of opportunity. Point Wilson is that point.

Wholesale and retail

Wholesale is the long term storage of slow moving parts. Retail is the turnaround required in the maintenance pipeline and also to sustain ships' requirements to meet proactive exercise requirements.

Interim arrangements

Would need to have interim facility. Would take a year to develop a case & get approval for development at Eden. This would not meet the requirement to get out of Sydney by the time of the Olympics. Would need to have an interim facility—presumably Point Wilson. If made an early decision that Point Wilson was going to be the import facility, would simply go ahead with planning for minimum works required for imports.

Cathodic protection: cost 51 represents about 2/3 of amount of wharf & jetty works.

Fenders: (52) Existing timber fenders suitable for commercial operations but not for thinner hull naval vessels. New fendering 3 metre long rubber tubes, 2 metres in diameter. Placed 12 metres apart along side of wharf.

Environmental Commission of inquiry: 50 About $6-6.5 million has been spent on environmental work, including the commission of inquiry.